

SCHEDULE A

discloses a polymer composite second tubular member running full length of the barrel portion of the bat with the barrel members joined at the ends only of the barrel portion with the balance of the composite member freely movable relative to the primary member. US patents 6,440,017B1 and 6,612,945 B1 to Anderson also disclose double-wall bats with an outer sleeve and inner shell of constant thickness running full length of the barrel portion.

[0011] US patent 6,053,828 to Pitsenberger discloses a double-wall bat consisting on an internal body and an external shell of constant thickness running full length of the barrel portion in a double-wall construction. US patent 6,461,260B1 to Higginbotham discloses the bat of 6,053,828 with a composite shell formed to an outer shell running full length of the barrel portion of the bat.

[0012] Similarly, US Patent 6,425,836B1 to Misono discloses a double-wall bat with a lubricated coating between layers or a weak boundary layer formed on the surfaces of the inner member.

[0013] US Patent Pub. ~~{2001}~~2002/0094892 A1 by Chauvin discloses a double-wall bat consisting of an outer shell and an insert laminate partially bonded to the shell.

[0014] In all prior art multi-walled tubular bats, the primary bat frame member and secondary barrel member(s) extend along the entire barrel length and are of constant thickness. Also, the bat members in the barrel portion are not joined, except at their ends, in order to reduce radial stiffness of the barrel portion to improve bat performance. This provides a trampoline effect which is greatest in the central barrel area called the sweetspot. Increasing the barrel portion, or hitting area, increases the sweetspot size similarly to increasing the hitting areas of tennis racquets and golfclubs.

[0015] All such prior art double wall bats, of any material, have cylindrical handle portions and cylindrical barrel portions. Both portions being continuous with a cylindrical taper portion increasing in diameter from the handle portion to the barrel portion. It is well known that hits in the sweetspot area do not produce unpleasant sting in the batter's